

REMARKS

Withdrawal of all the previous rejection is respectfully acknowledged. The new rejections are addressed below.

The Amendments

No amendments to the existing claims were made. Dependent claims were added finding full support in the disclosure, see, e.g., page 1, lines 13-22. The amendments do not narrow the scope of the claims and/or were not made for reasons related to patentability. The amendments should not be interpreted as an acquiescence to any objection or rejection made in this application.

The Rejections under 35 U.S.C. § 103

The rejections of all the claims under 35 U.S.C. § 103, as being obvious over Beuzelin (UK 2288177) in view of Hughes (U.S. Patent No. 5,705,565) or further in view of Zhang (U.S. Patent No. 5,516,583) or Melot (U.S. Patent No. 5,998,545), are respectfully traversed.

The discussion of Beuzelin in the Reply filed with RCE filing on August 15, 2003, still fully applies and is incorporated herein by reference. The following additional comments are provided for emphasis and to address the Hughes reference added to the rejection.

As recognized in the Office Action, Beuzelin fails to disclose a binder which is a mixture of polyolefin and polyamide. Specifically, as applicants previously showed, the Beuzelin binder contains no polyamide component. (The Office Action contains contradictory statements on this at page 3, lines 10-13, but it seems clear from the discussion

of Hughes which follows these statements that the latter statement recognizing absence of the polyamide is what was intended.) It is alleged in the Office Action that Hughes teaches it would have been obvious to include a polyamide component in the binder layer of Beuzelin. Although it remains applicants' position that the claimed invention is distinguished from Beuzelin in other respects as well (see discussion below), applicants will first discuss why Hughes does not suggest modifying the Beuzelin binder to provide a polyamide component therein. This alone would provide sufficient grounds for withdrawing each of the rejections.

It is submitted in the Office Action that Hughes teaches a composition comprising high-density polyethylene (HDPE) and low-density polyethylene (LDPE) is equivalent to a composition containing HDPE, LDPE and a polyamide as a binder layer having desirable adhesive properties. This is not a correct interpretation of the Hughes reference, however. Hughes is directed to a graft-modified ethylene polymer where the ethylene polymer is, particularly, a substantially linear ethylene polymer. Hughes teaches that the adhesive properties of the polymer are improved due to the use of the substantially linear ethylene polymer. See, e.g., col. 1, lines 58-64. Hughes teaches several separate uses for its polymers. They are taught for use:

- as compatibilizers for filled resinous products; see, e.g., col. 4, lines 24-61;
- blended with other polymers for used in preparing molded or shaped articles; see, e.g., col. 4, line 62, to col. 5, lines 59, and col. 2, lines 4-7;
- in adding paintability to a molded article surface; see, e.g., col. 5, line 60, to col. 6, line 2; and
- in providing an adhesive film (i.e., a binder layer) between other polymer layers; see, e.g., col. 6, lines 2-12.

The only use for which Hughes suggests adding other polymers to its special graft polymer is in making molded or extruded shaped articles. Only here is there a suggestion to use the special graft polymer with any of a number of other polymers, including other olefin or non-olefin polymers. It is only for this use that Hughes suggests blending its special graft polymer with a polymer such as a polyamide. When Hughes discusses the separate use of its special graft polymer as an adhesive layer or binder (col. 6, lines 2-12), it provides no suggestion at all to combine the polymer with any other olefin or non-olefin polymer. The Hughes examples also show this fact. When testing the adhesive properties of its polymer, Hughes only uses a layer of the grafted substantially linear ethylene polymer; see, col. 8, lines 9-62. Other polymers, such as polyamides, are added to the grafted polymer only when testing impact/strength-related properties of molded articles or testing as compatibilizers; see, col. 8, line 63, to col. 9, line 64, and cols. 14-17.

Thus, Hughes does not suggest providing a binder or adhesive which contains a polyamide together with its grafted substantially linear polyethylene. And it would not suggest replacing or modifying the binder layer in Beuzelin to provide a polyamide in its binder layer. Hughes only suggests combining a polyamide with its special grafted polymer when preparing shaped articles to improve their impact properties. Since Beuzelin does not relate to such a use, there would be no motivation to one of ordinary skill in the art use Hughes' polyamide-containing blends in the Beuzelin layered materials. Further, Hughes makes no suggestion that any of the polyamide or other additional polymers would aid in the adhesive properties. To the contrary, Hughes uses only the grafted substantially linear ethylene polymer when adhesiveness/binder properties are desired, thus, suggesting that other components would, if anything, be detrimental to the adhesive effect.

At least for these reasons, the rejections should be withdrawn since Beuzelin and Hughes are not properly combinable in a manner which suggests applicants' invention.

Even if Hughes were combinable with Beuzelin regarding its polyamide teachings, the combined teachings of these references would not fairly suggest applicants' invention. Instant claim 21 literally recites a very specific combination of components for the third layer, i.e., the third layer either comprises:

- (1) a polyamide and a polyolefin which includes a HDPE and a C2 grafted polymer mixed with a C2 ungrafted polymer; or
- (2) a polyamide and a polyolefin which includes HDPE and a mixture of a polyethylene and a C2 polymer which are co-grafted.

As to the alternative (1) for the third layer (see also claim 32), even if the Beuzelin "binder" modified by Hughes generically encompasses the possibility of a mixture of polyamide, HDPE and C2 polymers both grafted and ungrafted, it certainly encompasses hundreds, if not thousands, of other possibilities which are not such a mixture. The definition of the binder at pages 3-5 of Beuzelin contains so many possible alternative permutations that it cannot fairly suggest picking out the particular combination of applicants' four components for this embodiment. The only suggestion for arriving at applicants' four component embodiment, by looking at all the possible permutations from Beuzelin's binder definition and including the possible permutations from Hughes, is by using applicants' own disclosure as a blueprint or guide to select this particular combination of components. Such use of applicants' own disclosure does not properly support obviousness under 35 U.S.C. § 103; see, e.g., Grain Processing v. American Maize, 5 USPQ2d 1788, 1792 (Fed. Cir. 1988); and Orthopedic Equipment Co., Inc. v. United States, 217 USPQ 193, 199 (Fed. Cir. 1983). Additionally, the specific embodiments and examples which are disclosed in Beuzelin and

Hughes are nothing like this embodiment of applicants' third layer. So, they also give no direction towards the claimed invention. The Office Action separately addresses claim 32 on page 6 alleging that Beuzelin suggests HDPE plus LDPE co-grafted with an unsaturated carboxylic acid. But applicants' claim 32 embodiment does not recite a co-grafted component so this allegation is not relevant. In any event, such a co-graft is not suggested by Beuzelin (see next paragraph).

As to alternative (2) for the third layer (see also claim 31 directed to this embodiment), Beuzelin does not even generically encompass or suggest any embodiment which includes a co-graft of polyethylene and a C2 polymer. The only co-grafts generically included in the Beuzelin binders are co-grafts with polystyrene, which is not a C2 component of applicants' invention. Given the hundreds, if not thousands, of possible permutations generically encompassed in the definition of the Beuzelin binder, the fact that applicants' embodiment is not even encompassed by such a broad disclosure irrefutably establishes that applicants' embodiment is not suggested by the prior art. The Office Action states on page 6 that Beuzelin suggests HDPE plus LDPE co-grafted with an unsaturated carboxylic acid, and refers to page 9, lines 7-19, and page 5, lines 16-23, of Beuzelin as supporting this. But the section from page 9 discussing ethylene polymers (c) for grafting relates to the polymers which are co-grafted with a polymer (a), i.e., styrene, to make the A3 co-grafted component. There is no suggestion from Beuzelin to co-graft two (c) polymers from the list on page 9; see the definition of the (A3) component at page 3, line 28, to page 4, line 15.

In connection with the above discussion, the nonobviousness of picking and choosing from Beuzelin's vague and generic disclosure the necessary components (some of which are not even generically encompassed) to arrive at applicants' polyolefin component is further compounded by the necessity to also combine the alleged suggestion of additional

components from Hughes to piece together applicants' third layer. In addition to all the possible permutations of Beuzelin's binder, one of ordinary skill in the art, if they were to improperly combine Hughes' teachings, would not necessarily select combining a polyamide from the Hughes teachings. Hughes teaches a large number of possible additional polymers for its shaped articles use embodiments; see, e.g., col. 5 of Hughes. Again, the only suggestion to pick a polyamide from such possibilities is by use of applicants' own disclosure as a blueprint for piecing together the claimed invention. Such analysis does not properly support a rejection under 35 U.S.C. § 103.

In addition to all of the above, it is urged that the binder of Beuzelin cannot satisfy the "third layer" recitation of the instant claims. In this art, one of ordinary skill in the art would know that a binder layer is distinct from a structural layer and it is clear from the claims that applicants' third layer is a structural layer, not a binder layer. A binder layer is different structurally and serves a distinct function, i.e., merely to attach the two adjoining layers. Thus, the initial premise for the rejection, i.e., that the binder of Beuzelin serves as the third layer of the claimed invention, is not supported. This distinction is even more evident since the instant claims recite a binder layer separate from the first through third layers. This makes clear that the first, second and third layers of the instant claims are not binder layers. Regarding claim 22, reciting a further binder layer between the second and the third layer, the distinction is even more evident. The Office Action, page 4, states that it would be obvious to repeat a prior art element, thus, apparently providing a Beuzelin binder layer meeting applicants' binder and an additional binder layer on the other binder layer meeting applicants' third layer. The cited *St. Regis* case law does not support this conclusion on the instant facts. The combination in *St. Regis* was obvious because there was motivation in the art to add an additional layer to meet the stated objective of strengthening the bag. There is no motivation

to provide an additional adhesive binder layer when one already exists. A binder layer binds together two structure layers on either side of it. One of ordinary skill in the art would see no need, and thus have no motivation, to provide a binder layer to bind to another binder layer. There is nothing in the art to motivate such unnecessary and potentially detrimental duplication.

It is urged that the case for nonobviousness is even stronger with regard to claims 43-45 reciting more particularized details of the third layer. As discussed above, the combined reference teachings fail to point to a third layer meeting all the requirements of claim 21. The further requirements of claims 43-45 are even more remote from the references' teachings and even more clearly not suggested to one of ordinary skill in the art.

Regarding new claims 47 and 48, the references provide no suggestion, whatsoever, of a device for transferring and/or storing the types of fluids recited here.

Regarding new claim 49, the "consisting essentially of" language would exclude the required polystyrene layer of Beuzelin. Thus, this claim is even more clearly distinguished from the references' teachings.

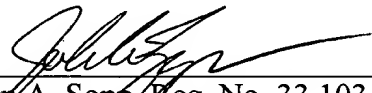
The Zhang and Melot secondary references were cited for alleged teachings regarding dependent claim aspects. They were not cited for – and do not teach – modification of the Beuzelin or Hughes structure in any manner which makes up for the above-noted deficiencies of these references. Thus, their combined teachings with Beuzelin and Hughes fail to render the claimed invention obvious for the same reasons as discussed above.

For the above reasons, it is urged that each of the rejections under 35 U.S.C. § 103 be withdrawn.

It is submitted that the claims are in condition for allowance. However, the Examiner is kindly invited to contact the undersigned to discuss any unresolved matters.

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



John A. Sopp, Reg. No. 33,103
Attorney for Applicants

MILLEN, WHITE, ZELANO &
BRANIGAN, P.C.
Arlington Courthouse Plaza 1, Suite 1400
2200 Clarendon Boulevard
Arlington, Virginia 22201
Telephone: (703) 243-6333
Facsimile: (703) 243-6410

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